

REMARKS

Applicant is in receipt of the Office Action mailed January 6, 2005. Claims 29 – 48, and 53-70 have been cancelled. New claims 71-104 have been added. Thus, claims 71-104 remain pending in the application. Reconsideration of the present case is earnestly requested in light of the following.

IDS Initialization

Applicant notes that the Examiner failed to initial the reference to U.S. Patent No. 6,763,515 in the Electronic Information Disclosure Statement provided by Applicant, and received by the USPTO on September 15, 2004.

Section 103 Rejections

Claims 29, 30, 32-36, 39, 46-48, 53, 54, 57, and 58 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,675,801 to Lindsey (“Lindsey”) in view of U.S. Patent No. 6,263,362 to Donoho et al. (“Donoho”) and further in view of U.S. Patent No. 5,940,296 to Meyer (“Meyer”).

Claim 31 was rejected under 103(a) as being unpatentable over Lindsey, in view of Donoho, and further in view of Fukushima et al (U.S. Patent No. 5,940,530, “Fukushima”).

Claim 40 was rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey in view of Donoho, and further in view of Meyer and Windows 98 for Dummies by Randy Rathbone (“Rathbone”).

Claims 49 and 51 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, in view of Donoho.

Claim 50 was rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, in view of Meyer, and further in view of Donoho.

Claim 52 was rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, in view of Meyer, and further in view of Donoho and Rathbone.

Claims 37, 38, 41-45, 55, 56, and 59-63 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, in view of Donoho, and further in view of Meyer and Amberg et al (U.S. Patent No. 5,995,757, “Amberg”).

Applicant has cancelled these claims and so the rejection of these claims is rendered moot. Applicant has added new claims which Applicant believes are patentably distinct and non-obvious over Lindsey, Donoho, and Meyer, taken singly, or in combination, as explained below.

Claim 71 recites:

71. A computer-readable memory medium that stores program instructions for creating a prototype for performing a machine vision process to solve a machine vision problem, wherein the program instructions are computer executable to perform:

displaying information indicating a plurality of machine vision problems;

receiving user input selecting a machine vision problem from the plurality of machine vision problems; and

automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions.

As argued in the previous Responses, Lindsey relates generally to an object-oriented system and method for generating target language code. A user manipulates an object-oriented user interface to select and combine objects to represent a desired computer programming function (Abstract; Col. 5 line 67 – Col. 6 line 3). “The result is an object-oriented model of the desired target language program” (Abstract), which is processed by a generator engine into source code comprising a set of code templates, each code template corresponding to a different construct in the target language and comprising fragments of code (Abstract; Col. 2 line 65 – Col. 3 line 15).

In regard to claim 71, the claim recites in part, “displaying information indicating a plurality of machine vision problems” and “receiving user input selecting a machine vision problem from the plurality of machine vision problems”. The Office Action asserts that Lindsey teaches receiving user input specifying a problem from a plurality of problems in Col. 5 line 67 – Col. 6 line 3, apparently referring to the manner in which the user manipulates the object-oriented user interface to create a representation of a desired computer programming function, as described above. Applicant respectfully disagrees.

Applicant submits that “an object-oriented model of the desired target language program” that is constructed by the user, as described by Lindsey, is not the same as “receiving user input selecting a machine vision problem from the plurality of machine vision problems”. Rather, as noted above, the “object-oriented model of the desired target language program” is more appropriately referred to a prototype of the program or function, as known to those skilled in the art of software prototyping.

Additionally, as stated in the cited portion of Lindsey (Col. 5, line 67 – Col. 6, line 3), “The user manipulates the object oriented interface via one or more of the interface devices to select and combine objects in a manner which represents the desired function.” Moreover, as stated in Col. 6, lines 12-16, in Lindsey’s system, the user is “defining instances of object oriented classes available through the object oriented user interface. Each defined instance of a class is known as an object; the set of objects that the user defines is the object oriented program.” Applicant submits that the user’s selection and specification or definition of class instances for an object oriented program as taught by Lindsey is not at all the same as user input selecting a *machine vision problem* from a plurality of machine vision problems. In other words, Applicant submits that in Lindsey’s system, the user provides a prototype of the desired function in the form of the selected and combined objects, and target language code is automatically generated based on the prototype.

Thus, Applicant respectfully submits that the Examiner’s interpretation of Lindsey’s user-created prototype (the user-selected and user-combined objects) as a user-selected problem is improper.

The previous Office Action also stated that Lindsey teaches automatically creating a prototype including a plurality of elements in response to the specified problem wherein the plurality of elements are operable to perform a process that solves a specified problem, in Col. 2 line 65 – Col. 3 line 15. However, this portion of Lindsey relates to generating source code to implement the object-oriented program specification created by the user using the object-oriented user interface. It does not teach the concept of automatically creating a prototype based on user selection of a machine vision problem from a plurality of machine vision problems. More specifically, Lindsey does not teach *automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions.*

Rather, Applicant submits that in Lindsey's system, the user creates what may be considered a "prototype of a solution" ("an object oriented model of the desired target language program"), and specifically does not select a problem, and that Lindsey then generates program code based on the user created or specified prototype solution. Applicant submits that creating a prototype solution, then generating program code implementing that solution is quite different from selecting a problem, then automatically generating a solution that solves the problem, i.e., a prototype, "*wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem*". Moreover, Lindsey also fails to teach or suggest "*wherein said automatically creating is performed without direct user input selecting the functions*".

Applicant further notes that nowhere does Lindsey teach, suggest, or even hint at, machine vision processes, machine vision problems, or machine vision at all.

Regarding Donoho, as stated in the Abstract, "the invention relates to a new process of communication using computers and associated communications

infrastructure. More particularly, the invention relates to a method and apparatus for computed relevance messaging.” Applicant notes that Donoho neither teaches nor suggests machine vision processes, machine vision problems, or machine vision at all. Nor does Donoho teach or suggest prototypes, nor the automatic generation of such based on a user-selected machine vision problem.

As Donoho describes in the Summary, in Donoho’s system, advice providers “author advisories, which are specially structured digital documents which may contain:

- (1) Humanly-interpretable content, such as text and multimedia;
- (2) Computer-interpretable content, such as executable programs and data; and
- (3) Expressions in a special computer language called the relevance language.”

Additionally, “The humanly-interpretable content in an advisory may describe the condition that triggered the relevance determination and propose an action in response to the condition, which could range from installing software to changing system settings to purchasing information or software.”

Moreover, “Applications referred to as advice readers running on the computers of advice consumers periodically obtain advisories from advice servers which operate at advice sites. Advice readers process the messages so obtained and automatically interpret the relevance clauses. They determine whether a given message is relevant in the environment defined by the consumer's computer and associated devices. The user is then notified of those messages which are relevant, and the user may read the relevant advisories and invoke the recommended actions.”

Thus, in Donoho’s system, each advisory includes the conditions (problem) *and* the instructions (solution). In other words, the solution is provided with the problem statement or condition. Additionally, the advisories are retrieved by advice readers (programs running on the user’s computer system) and evaluated for relevance, prior to presenting them to the user. Applicant respectfully submits that Donoho does not teach *displaying information indicating a plurality of machine vision problems, receiving user input selecting a machine vision problem from the plurality of machine vision problems; and automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a*

prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions.

Applicant submits that Donoho fails to teach or suggest a prototype at all, as defined in claim 71 and the Specification, “*wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem*”.

The previous Office Action admitted that neither Lindsey nor Donoho teaches or suggests that the problem is a machine vision problem, but then cited Meyer in an attempt to correct the deficiencies of Lindsey and Donoho. Moreover, in the current Office Action, the Examiner’s arguments were only directed to Meyer, where the Examiner asserts that Meyer teaches “Displaying information indicating plurality of machine vision problems [sic]”, and “Concept of automatically creating a prototype based on user selection of machine vision problem [sic]”. Applicant respectfully disagrees.

As noted in the previous Response, Meyer discloses a system for graphically constructing machine vision control sequences, but neither mentions nor hints at user-selection of a machine vision problem, and automatic creation of a solution that solves the selected problem, more specifically, Meyer fails to teach or describe “*displaying information indicating a plurality of machine vision problems; receiving user input selecting a machine vision problem from the plurality of machine vision problems; and automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions*”.

In fact, as stated in the Abstract, Meyers teaches a system and method “for interactively developing a graphical, control-flow structure and associated application

software for use in a machine vision system". Thus, Meyers teaches the interactive development of a solution by a user, *not* user-selection of a problem, and automatic creation of a solution for the selected problem, in the form of a prototype as defined in claim 71 and the Specification.

For example, the Examiner cites Meyer's Abstract and Col. 2, lines 31-67, in asserting that Meyer teaches "that commands are received from the user of the computer system to select a first control program corresponding to a desired component of user interface and second control program corresponding to desired machine vision problem". The Examiner then states that, based on this, Meyer's method provides an opportunity for the user "to interact with the system and choose different commands via GUI environment to visualize machine vision problems thru menu, which also displays different characteristics and enables user to interactively design, modify and explore operating characteristic as well [sic]". The Examiner then apparently considers this to disclose "displaying information indicating a plurality of machine vision problems; and receiving user input selecting a machine vision problem from the plurality of machine vision problems.

However, Applicant respectfully submits that the Examiner has mischaracterized (and misquoted) Meyer. For example, in the above cited passages, Meyer makes *no* mention of a user-selected "second control program corresponding to a desired machine vision problem", but rather (in the Abstract) refers to user-selected "second control programs corresponding to *desired machine vision algorithms*". As is well known to those of skill in the art, an algorithm is *not* a problem statement, but rather a description of a solution to a problem. Additionally, nowhere in the cited passages does Meyer describe that the method allows the user "to interact with the system and choose different commands via GUI environment to visualize machine vision problems thru menu, which also displays different characteristics and enables user to interactively design, modify and explore operating characteristic as well [sic]". Moreover, Applicant submits that even the Examiner's mis-characterization of Meyer does not describe "*displaying information indicating a plurality of machine vision problems*" and "*receiving user input selecting a machine vision problem from the plurality of machine vision problems*". Thus, Meyer does not teach or suggest these limitations of claim 71.

In asserting that Meyer teaches the "Concept of automatically creating a prototype based on user selection of machine vision problem [sic]", the Office Action cites Col. 2, lines 35-57, and states that Meyer "allows user to develop software application for use in machine vision problem without writing a any code [sic]" and that it therefore "depicts that this process is done automatically and a application or prototype is developed for machine vision problem [sic]". However, as noted above, Meyer nowhere teaches, suggests, or even hints at, *a prototype*, or automatic generation of same. Rather, Meyer describes top-down or bottom-up interactive specification and creation of application programs by a user via a tool, e.g., a wizard. Applicant notes that while in Meyer, the user does not write any application code *per se*, the user does specify the application program in an interactive manner in a top-down or bottom-up design process, as known to those of skill in the art of application design and development. Moreover, as noted above, Meyer never describes, suggests, or even mentions a prototype, and submits that the Examiner's attempt to equate a prototype with an application is improper. Applicant thus submits that Meyer fails to teach or suggest "*automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions*".

Thus, for at least the reasons provided above, Applicant submits that Meyer, either singly, or in combination with Lindsey and/or Donoho, fails to teach all the features of claim 71.

Additionally, as the Examiner is certainly aware, to establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In *re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or

incentive to do so. In re Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Moreover, as held by the U.S. Court of Appeals for the Federal Circuit in *Ecolochem Inc. v. Southern California Edison Co.*, an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis.

In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings “must be clear and particular Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’.” *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant respectfully submits that neither Lindsey nor Donoho nor Meyer provides a motivation to combine. For example, as noted above and as admitted by the Examiner, neither Lindsey nor Donoho suggests or even hints at machine vision problems and solutions. As argued above, Meyer discloses a system for graphically constructing machine vision control sequences, but neither mentions nor hints at user-selection of a machine vision problem, and automatic creation of a solution that solves the selected problem, more specifically, Meyer fails to teach “*automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions*”. In fact, as stated in the Abstract, Meyers teaches a system and method “for *interactively developing* a graphical, control-flow structure and associated application software for use in a machine vision system”. Thus, Meyers teaches the interactive development of a solution by a user, *not* user-selection of a

problem, and automatic creation of a solution for the selected problem, in the form of a prototype as defined in claim 71 and the Specification.

Applicant submits that the Examiner has simply selected and assembled various portions of the cited art in an attempt to produce Applicant's invention using Applicant's claim 29 as a blueprint, which is improper. Please see *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985) (it is insufficient to select from the prior art the separate components of the inventor's combination, using the blueprint supplied by the inventor). Applicant further submits that the only motivations to combine suggested by the Examiner are improved results of the combination, i.e., "since this allows the user to effect solutions for a number of predetermined problems...", and "since this allows the prototype to solve a number of problems relating to machine vision".

Thus, regarding the Office Action's assertion that Lindsey, Donoho, and Meyer may be combined to produce Applicant's claimed invention, Applicant submits that the combination is improper, and that even were Lindsey, Donoho, and Meyer properly combinable, which Applicant argues they are not, the resulting combination would not produce Applicant's invention as represented in claim 71, as argued in detail above. For example, Applicant submits that Lindsey does not teach selection of a machine vision problem and automatic generation of a prototype solution, as argued above, and that Donoho does not teach displaying information indicating a plurality of machine vision problems, but rather, teaches displaying advisories that include respective situations as well as proposed actions to correct the situations based on a relevance determination performed by an advice reader (see Figure 2, and Col. 6, lines 2-68), and finally, that Meyer does not teach or suggest selection of a machine vision problem and automatic generation of a prototype machine vision solution as defined. Thus, the suggested combination of Lindsey, Donoho, and Meyer still would not produce Applicant's invention as represented in claim 71.

Applicant thus submits that claim 71 and its dependent claims are patentably distinct and non-obvious over the cited art, and are thus allowable, for at least the reasons

given above. In addition, the claims dependent on claim 71 recite numerous elements that are not disclosed or suggested by the cited references, taken either singly or in combination. Inasmuch as independent claims 94, 101, 102, and 104 recite elements similar to those of claim 71, Applicant also believes these claims and their respective dependent claims to be patentably distinct and non-obvious, and thus allowable for at least the reasons presented above.

For at least the reasons presented above, Applicant respectfully submits that the claims as currently presented are patentably distinct and non-obvious over Lindsey, Donoho, and Meyer, taken singly or in any combination thereof.

Applicant has also read the Fukushima, Rathbone, and Amberg references closely, and can find no descriptions of the features and limitations of the independent claims. Nor can Applicant find any motivation to combine in these references.

Applicant thus submits that the claims as currently presented are also patentably distinct and non-obvious over Lindsey, Donoho, Meyer, Fukushima, Rathbone, and Amberg, taken singly or in any combination thereof.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

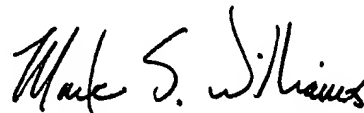
In light of the above remarks, Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-44800/JCH.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☒ Request for Continued Examination
- ☒ Information Disclosure Statement

Respectfully submitted,



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